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International application number: PCT/US05/002227

International filing date: 19 January 2005 (19.01.2005)

Document type: Certified copy of priority document

Document details: Country/Office: US  
Number: 60/561,351  
Filing date: 12 April 2004 (12.04.2004)

Date of receipt at the International Bureau: 18 February 2005 (18.02.2005)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)



World Intellectual Property Organization (WIPO) - Geneva, Switzerland  
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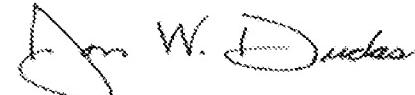
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APPLICATION NUMBER: 60/561,351

FILING DATE: April 12, 2004

RELATED PCT APPLICATION NUMBER: PCT/US05/02227

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60/561351  
U.S. PTO  
041204**INVENTOR(S)**

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Additional inventors are being named on the \_\_\_\_\_ separately numbered sheets attached hereto

**TITLE OF THE INVENTION (280 characters max)**

DIFFERENTIAL CODING WITH EXP-GOLOMB METHOD FOR CODING Q-MATRIX

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**ENCLOSED APPLICATION PARTS (check all that apply)**

<input checked="" type="checkbox"/> Specification	Number of Pages	2	<input type="checkbox"/> CD(s), Number	
<input checked="" type="checkbox"/> Drawing(s)	Number of Sheets	1	<input checked="" type="checkbox"/> Other (specify)	Attachment - pages 1-4 Attachment - pages 1-94
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76				

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Respectfully submitted,

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REGISTRATION NO. 25,124  
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Docket Number: 17366-3350

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Number 2 of 2

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Applicant(s):

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17366-3350

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Invention:

**DIFFERENTIAL CODING WITH EXP-GOLOMB METHOD FOR CODING Q-MATRIX**

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**DIFFERENTIAL CODING WITH EXP-GOLOMB  
METHOD FOR CODING Q-MATRIX**

**BACKGROUND OF THE INVENTION**

**Field of the Invention**

The present invention is directed to enabling quantization of matrices to be carried out and represented in a video coding system that contains intra-prediction and more particularly creating a series of cyclic difference values suitable for signed Exp-Golomb codes.

**DESCRIPTION OF RELATED ART**

The prior art is aware of quantization matrix for video coding and the applicability of Exp-Golomb codes. Video code has also been represented in hierarchical syntactic structure with associated semantics and has used both lossy and non-lossy or Variable Length Coding in video compression. Transform domain quantization has also been known and used.

**SUMMARY OF THE INVENTION**

The present invention describes a method and program for representing, carrying and enabling video compression by using quantization weighting matrices and addresses the following features:

1. Enable quantization matrices to be carried and represented in a video coding system that contains intra-prediction.
2. Define and carry quantization weighting matrices that can be implemented by integer based and division free computation.
3. Enable quantization matrices to be encoded in an efficient Cyclic Differential code and Exp-Golomb code.
4. Support quantization matrix representation that allows redundant weighting values to be derived at decoder side rather than being carried over communication transport data.

**BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 shows an example mapping of two-dimensional matrix entries into a one-dimensional series according to an embodiment of the present invention.

**BRIEF DESCRIPTION OF PREFERRED EMBODIMENT**

See attached pages 1-4.